

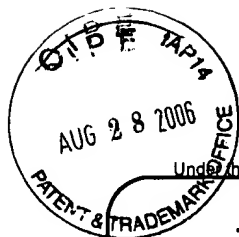
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First Named Inventor D. G. Carpenter

Art Unit 2834

Examiner Name N. Ponomarenko

Attorney Docket Number 021215/S

ENCLOSURES (Check all that apply)

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Langdale Vallotton, LLP		
Signature			
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Donald Gilbert Carpenter **Examiner:** N. Ponomarenko
Application No.: 09/935,936
Filed: August 23, 2001 **Art Unit:** 2834
For: ENERGY CONVERSION TECHNIQUE

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: DONALD GILBERT CARPENTER Art Unit: 2834

Serial No.: 09/935,936

Filed: August 23, 2001

For: Energy Conversion Technique Examiner: Nicolas Ponomarenko

REPLY BRIEF

Honorable Commissioner for Patents
Post Office Box 1450
Alexandria, VA 22313-1450

Sir:

The Examiner is correct, in the Answer mailed from the Patent and Trademark Office on July 3, 2006, in the comment with respect to the "Summary of Claimed Subject Matter" that the claimed subject matter page references are not properly identified in Appellant's Fourth Supplemental Appeal Brief, filed November 14, 2005.

Appellant's undersigned counsel apologizes for this error and respectfully submits the following table that associates the claim numbers and the relevant paragraph numbers with the pages on which these descriptions in the specification of the claimed subject matter appear:

<u>Claim and Paragraph Number</u>	<u>Specification Page Number</u>
Claims 1 and 2, paragraph 73	page 14
Claims 1 and 2, paragraph 74	page 15
Claims 3, 5 and 6, paragraph 76	pages 15 and 16
Claims 3, 5 and 6, paragraph 74	page 15
Claim 4, paragraph 93	pages 20 and 21
Claim 7, paragraph 93	pages 20 and 21
Claim 8, paragraph 99	pages 22 and 23

Thus, in the Fourth Supplemental Appeal Brief's "Summary of Claimed Subject Matter", the paragraph numbers associated with the claimed limitations in each of the claims on appeal all were correctly stated. The page numbers on which these paragraphs appear in the Fourth Supplemental Appeal Brief, however, as the Examiner pointed out, were not correctly identified. The foregoing table, it is urged, corrects this error and undersigned counsel regrets having imposed this burden on the Examiner and on the Board.

With respect to "Evidence Relied Upon", the Answer has not relied upon Appellant's "Declaration Under Rule 37 CFR ¶132" filed March 7, 2003, (copy enclosed) in response to the First Official Action in this case dated (November 7, 2002). Appellant nevertheless submits this evidence to the Board for its careful consideration. The Rule 132 Declaration in question

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describes a simple experiment that irrefutably proves the gravamen of Appellant's claimed invention, the observation of a small increment of energy as a function of the place from which the experiment is observed.

Although Appellant's Rule 132 Declaration has not been evaluated at any point in the prosecution thus far, Appellant respectfully urges that the Board correct this deficiency and accord to the Rule 132 Declaration the proper technical review that it deserves and for which the United States Patent and Trademark Office has achieved world-wide respect.

Turning now to the "Grounds of Rejection", with respect to the Drawing, it is discouraging to learn in the Answer that the requirement continues for an illustration in the drawing of the way in which the kinetic energy of magnetized objects 46, 47 in Fig. 3 induce a current in the electrically conductive coils 43, 44.

No one really knows how a moving magnetic field induces a current in an electrically conductive coil. But those familiar with electricity and magnetism all are agreed that a current nevertheless is generated.

How, then, can Appellant illustrate in his drawing this conversion feature, the actual nature of which is not known, beyond illustrating the magnetized objects 46, 47 and the electrically conductive coils 43, 44 in which the current is induced?

With respect to the sleeve or tube 73 described in the specification at paragraph 100, the reference numeral 73 was omitted from Fig. 8B through a mistake in editing. Nevertheless, the tube 73 certainly is identified as such in the third full sentence of paragraph 100 in the following words:

Each tube 73 has openings 74 down its sides....

The openings 74 are clearly marked in Fig. 8B.

We are all human and thus are subject to error, but to persevere in an error, once the error has been identified is really difficult to accept. For example, the requirement continues to identify the "Structural relationships between rods, connected to cylinders 21 and 22 and rods 51 and 51A (Fig. 6 and 7)."

As pointed out in the Fourth Supplemental Appeal Brief in the instant application, reference numerals 21 and 22 identify pistons and do not identify cylinders. Yes, as in most reciprocating engines, the rods are connected to respective pistons and not to the cylinders. There were, of course, a few notable exceptions in which the "rods" were connected to the cylinders, e.g. the Gnome LeRhône "rotary" aircraft engines of World War I. But these, indeed, were unusual exceptions to the general rule.

And again the Appellant is required to identify the structural relationship between "rods 72 and 82 (Fig. 8A and 8B)." Reference numeral 72 refers to an end of the rod 71 and not to the rod 71. Reference number 82, moreover, as stated in paragraph 100 of the specification is not a "rod", but is a one-way check valve!

How can Appellant possibly comply with the requirement to supply a corrected drawing when the drawing and its associated descriptions are correct, if only it could be recognized that cylinders are not pistons and that check valves are not “rods”!

The Answer, in contrast, dismisses these errors that go to the very basics of the claimed invention as an “...insignificant issue of naming the item....and anybody of any skill in the art would not have any problem to understand what the Examiner names.” (Answer, page 9, paragraph 1). Perhaps this odd viewpoint found its origin in Chapter 6 of Lewis Carroll’s “Alice Through the Looking-Glass”:

“But ‘glory’ doesn’t mean ‘a nice knock-down argument’
Alice objected.”

“When I use a word”, Humpty Dumpty said, in a rather scornful tone, “it means just what I choose it to mean—neither more nor less.”

“The question is,” said Alice, “whether you *can* make words mean so many different things.”

Apart from the clear errors in the Answer and in the Office communication dated September 15, 2004 (page 3) with respect to the relationships between pistons/cylinders/rods/check valves, and the even more disturbing failure in the Answer to rectify these errors when they were pointed out (cf Second Supplemental Appeal Brief, pages 2 through 4), one is compelled to wonder what other, more subtle errors exist in the Answer if such basic mechanisms as pistons, rods and cylinders are incorrectly identified.

Appellant and undersigned counsel have waited patiently for several years to present this application to the Board in the trust and belief that it will be accorded the fair and careful consideration that characterizes the United States’ patent examining system.

Specification:

All of the objections to the specification have been rebutted in the many earlier briefs filed in this Appeal.

Illustratively, please consider the objection to the statement in the specification that no one knows why an electrical conductor when moved relative to a magnetic field generates an electrical current as being “contradictory or speculative”. Without parsing the meaning of the phrase “contradictory or speculative” with respect to the stated phenomenon, it is sufficient to say that based on our present knowledge of electricity and magnetism, the statement is true.

The further argument raised about “excess” energy in a closed system that is alleged to have been described on page 4, lines 11 to 16 of the specification also is incorrect. There is no reference at all to any “excess” energy in the passage from which the word “excess” is quoted.

With respect to the objection to energy “transformation between the two systems”, this passage is stated in paragraph 22, but on page 4, not page 6, of the specification.

Undersigned counsel could continue with a further point-by-point refutation of the balance of the issues in the Answer. Inasmuch as several grounds of rejection that were earlier

asserted were not reasserted in the Answer without being expressly identified as "Grounds of Rejection Withdrawn" (cf "Manual of Patent Examining Procedure" ¶1207.02(A)(6)(a)) it is clear that these matters have been withdrawn de facto and do not require treatment in this Reply.

Thus, for a point-by-point refutation of the "Claim Rejections - 35 USC ¶112" (Answer, p. 5); "Claim Rejections - 35 USC ¶101" (Answer, p. 6-8); and "Response to Argument (Answer, p. 8 et seq.), the Board's attention is respectfully invited to Appellant's "Fourth Supplemental Appeal Brief", pages 13 through 29, inclusive.

There is, however, one exception to the foregoing statement and that is the citation on page 10 of the Answer of "A Text-Book of Physics", seventh edition, Longmans, Green and Co., 1920, page 87 which was cited in the Answer to support the statement in the September 15, 2004 Official communication that:

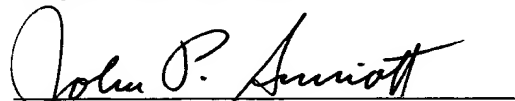
"...The sum total of all the energy within any given boundary through which energy is not allowed to pass remains constant."

Undersigned counsel has requested a copy of this 1920 physics text through an inter-library loan service in order to examine the extent to which the reference justifies the foregoing statement. A copy of the text in question has not yet been received. When received, however, undersigned counsel will supply the Board not only with a copy of the page in question, but also with Appellant's analysis of the cited reference and the associated rejection.

For the interim, however, the Board is respectfully urged to take judicial notice of the fact that there have been many important and startling advances in physics through the past eighty six years since this 1920 reference was published. Note particularly those fields related to conservation of mass/energy, conversions between mass and energy, and the like as described in the much more recently published references cited by Appellant earlier to support the prosecution of this case.

Accordingly, the Board is respectfully urged to allow claims 1 through 8 now standing in this case.

Respectfully submitted,



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: DONALD GILBERT CARPENTER Art Unit: 2834
Serial No.: 09/935,936
Filed: August 23, 2001
For: Energy Conversion Technique Examiner: Nicolas Ponomarenko

Declaration Under 37 C.F.R. § 132

I, the undersigned Dr. Donald G. Carpenter, residing at 3010 River Mist Grove, Colorado Springs, CO 80922-5201 declare as follows:

I am a retired Air Force Colonel, pilot and Commander who has strong credentials and success in both academic and industrial careers.

Academically, I have a Ph.D. and a master's degree in nuclear engineering, plus bachelor degrees in physics, electrical engineering, and electronic engineering technology. I taught physics for seven years at the United States Air Force Academy, holding during that time an Associate Professorship. I created the space physics course at the Air Force Academy, editing and writing much of the 700+ page textbook for that course. I retired as a full Professor of physics (Chapman College) and full Professor of electrical engineering (Colorado Technical University), and Dean of electrical engineering and computer engineering (Colorado Technical University).

My published works include 27 scientific papers and books. Other scientific efforts include numerous published letters, abstracts and invited talks. I was, while on active duty in the Air Force, a recipient of the Theodore von Karman Award (for science and engineering) for dramatic improvement in the accuracy of the SPACETRACK System for tracking Earth-orbiting satellites.

Also, while on active Air Force duty, I received the Legion of Merit for management of the 16th Surveillance Squadron (a SPACETRACK radar organization in the Aleutian Islands). I subsequently commanded a worldwide AF operations organization. My last active duty position before retiring from the Air Force was Chief of Space Surveillance. I was, moreover, in charge of systems engineering (electronic) for Contel's contract to provide ground/space telecommunications at Falcon Air Base (Space Command); and was a principal engineer in enabling Falcon to function well.

Following my retirement from active Air Force duty I worked for COLSA as a telecommunications consultant to the Royal Saudi Air Defense Forces.

Among my further technical and scientific achievements, I was the first scientist to warn and prove theoretically (*Journal of Geophysics*) that nuclear reactors in orbit about Earth would

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significantly increase the geomagnetically-trapped corpuscular radiation; subsequent Japanese experience with Russian Earth-orbiting reactors proved my analysis to be correct.

I also have held various other positions such as Senior Research Fellow for the International Society for Scientific Enquiry (ISPE).

Experimental Apparatus

The Experimental Apparatus equipment described herein is of minimum accuracy and precision, difficult to use, but quite inexpensive (see Figure 1). It is similar to that of a double pendulum. A wooden bar is supported at each end. Hanging by stranded picture wires from the wooden bar are two identical metal hex-head screws ([5/8]-11 4) so that, at the bottom of their respective swings, the heads of the screws engage endwise (and compress) a spring mounted between them. Each screw is suspended by two stranded wires, and each of those wires has one end attached to its own small hook screwed into one side of the wooden bar with the other end of the wire similarly attached to the other side of the wooden bar.

The screws are operated by swinging each of them back from the other, gaining potential energy as they necessarily rise to a pre-selected 'standard location'. They are released, allowing the potential energy to convert to kinetic energy as they return to their former lower positions and deposit the kinetic energy into the spring. The spring is made of 15 turns of number 19 steel wire coiled 33 millimeters long and of 11 millimeters outside diameter. Each screw head is larger than the diameter of the spring.

As shown in Figures 2 and 3, three paper cylinders are needed, with the first nested inside the second which is nested inside the third, so that each of the two nested cylinders slide relatively freely within the next larger cylinder. Their summed length needs to total greater than the length of the spring, each cylinder itself being less than 50% of the length of the spring (Figure 1). They are positioned in partially-nested fashion within the spring (Figure 3) so that their combined partially-nested length is the same as that of the 33 millimeter spring. Together, the spring and its enclosed partially-nested paper cylinders form an energy sensor. It is necessary that the paper cylinders have a small but non-zero amount of friction with respect to each other. Too little friction and the impact of the screw will cause the paper cylinders to over-respond; too much friction and the paper cylinders will not respond adequately. "Super Glue," a trademarked product is suitable for making the paper cylinders, but care must be taken to insure that the friction among the cylinders is adequate for the purpose of the experiment.

Experiment and Resultant Data

The experiment is tried three different times under each of three different conditions. The first condition is that the spring is suspended on thread below the wooden bar such that the screw heads will engage and compress it at their maximum speed (bottom of their paths). Before each trial, the partially-nested paper cylinders are placed within the spring so that one end of the largest cylinder is at one end of the spring and the contiguous opposite end of the smallest cylinder is at the other end of the spring. The length of the spring is recorded (x_0). Each screw is drawn back to its standard location, and they are released simultaneously. As the spring is struck on both ends approximately simultaneously and compressed, the total contiguous length of the

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partially-nested paper cylinders is reduced as shown in Figure 4. The new total length of the paper cylinders is measured after the system has settled down, and that length is recorded (x_1). The difference between it and the recorded, uncompressed spring length yields a measure ($x_0 - x_1 = \Delta x_1$) of the amount the spring was compressed. After this has been done three times, the results are averaged, and the average value (Δx_{1A}) is recorded to a precision of one millimeter for this first condition.

The second condition, illustrated in Figure 5, is that the spring is bonded (with Super Glue) by one end to the head of Screw 1 so that the free end of the spring rests loosely against the head of Screw 2. One end of the partially-nested cylinders is against the Screw 1 end of the spring while the other end of the partially-nested cylinders is at the other end of the now-cantilevered spring. Screw 1 is fixed in position so that it will not move when the spring is struck by the head of Screw 2. Screw 2 is withdrawn to its standard position and released. Again the resultant total length of the nested cylinders (x_2) is measured, and the magnitude of the spring compression found ($x_0 - x_2 = \Delta x_2$). After this has been done three times and the results averaged, the average value (Δx_{2A}) is recorded to a precision of one millimeter for this second condition.

The third condition, shown in Figure 6, is similar to the second condition in that one end of the spring is still bonded to Screw 1, and the free end of the spring rests loosely against the head of Screw 2. One end of the partially-nested cylinders remains at the other contiguous end of the cantilevered spring. Screw 1 and Screw 2 are each withdrawn to their standard locations and released simultaneously. Again the total length of the nested cylinders (x_3) is measured, and the magnitude of the spring compressed found ($x_0 - x_3 = \Delta x_3$). After this has been done three times and the results averaged, the average value (Δx_{3A}) is recorded to a precision of one millimeter for this third condition.

Theory

The spring and nested cylinders form an energy sensing device. When, as shown in Figure 5, a single moving screw and a single stationary screw compress the spring, the magnitude of the Force (F) exerted on the spring at each instant is $F = k(\Delta x)$, where k is the spring constant and (Δx) is the amount of compression. Force through differential distance ($d[\Delta x]$) is the differential Energy (dE) or work, which in integrated form for the second condition is $E_{2A} = (\Delta x_{2A})^2(k/2)$. The value of E_{2A} is the potential energy of a suspended single Screw before release from its standard location, and that same Screw's kinetic energy as it initially encounters the near end of the spring.

The value of E_{1A} is the average of the sum of the potential energies of the two Screws ($E_{1A} = 2E_{2A}$) that is deposited into the spring. Note that this conforms to the law of conservation of energy, and should be equal to approximately two times the potential energy of one screw.

The value of E_{3A} (illustrated in Figure 6) is a bit more of a problem for both minor and major reasons. The spring and nested paper cylinders are now part of Screw 1. The law of conservation of energy says that, when viewed from the position of the experimenter, the energy measured must equal approximately the sum of the potential energies (E_{1A}) of the two screws at their standard locations, which is about two times the potential energy (E_{2A}) of one screw at its

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standard position. The word approximately is used because the mass of Screw 1 now includes the mass of the spring and nested paper cylinders with glue. This, though, is a minor problem because the combined mass of the spring, nested paper cylinders, and dried glue is a very small fraction of the mass of a screw. The increase in energy expended is, thus, a minor fraction of the kinetic energy of one screw alone.

The major problem is that the energy measuring device is now part of Screw 1's system. It does not 'see' itself as moving but does see the Screw 2 system approaching a speed $2v$. This view is part of the concept first enunciated by Jules Henri Poincaré*: the laws of physics are the same in every frame of reference that is moving linearly with respect to each other. This means that $E_{3A}=4E_{2A}=2E_{1A}$ instead of $E_{3A}=2E_{2A}=E_{1A}$, as anticipated by the law of conservation of energy. Thus, because $E_{3A}-2E_{2A}=2E_{2A}$, an extra $2E_{2A}$ becomes available that comes from some source, the nature of which is not at all clear at this writing.

Results

The experimental results are shown in Table 1. Due to the lack of precision with these present experimental components, all numbers are rounded to the nearest millimeter, or to the nearest whole number in the case of fractions.

Condition	Spring Length (mm)		Δx_{CA}	$(\Delta x_{CA})^2$	$E_{CA}=(\Delta x_{CA})^2(k/2)$	E_{CA}/E_{2A}
	Original	Compressed				
C=1 (Cons. Energy)	33	26	7	49	$49(k/2)$	2
C=2 Cantilevered, One Screw, Immoblized	33	28	5	25	$25(k/2)$	1
C=3 Cantilevered, Both Screws Moving	33	23	10	100	$100(k/2)$	4

Conclusions

With respect to condition 1, the laws of conservation of momentum and conservation of energy both pertain. Both conservation of momentum and conservation of energy also pertain in condition 2. For condition 3, the law of conservation of momentum pertains and the law of conservation of energy is believed to pertain, the 'extra' energy ($2E_{2A}$) that appears in condition 3 coming from some source not previously recognized in such cases.

It must be emphasized that the device described in the instant patent application is no more a 'perpetual motion' machine than is a hydroelectric transformer. We do not know for

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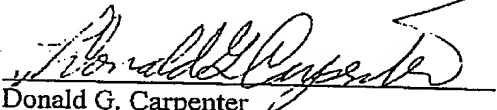
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certain at this time from where the extra energy comes for this simple experiment just as we also do not know why a wire moving at a right angle (relative to a magnetic field) through a magnetic field produces an electrical potential between the two ends of the wire. Thus, we do not know why a hydroelectric generator works.

Turning to the claimed invention, it matters not from whence this energy actually comes, it only matters that the claimed apparatus is a device that accesses this energy form without regard to the source of the energy.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date MARCH 4, 2003


Donald G. Carpenter

Reference

- * H. Poincaré, 'L'état Actuel et L'avenir de la Physique Mathématique' (The actual state and the path of mathematical physics) is the name of a lecture given at the St. Louis Conference, USA, 1904 September 24 (This information from the notes of Walter van der Kamp [died: 1998 January 26] was courteously supplied by C. van der Kamp 1998 August 25, Semi-private Communication).

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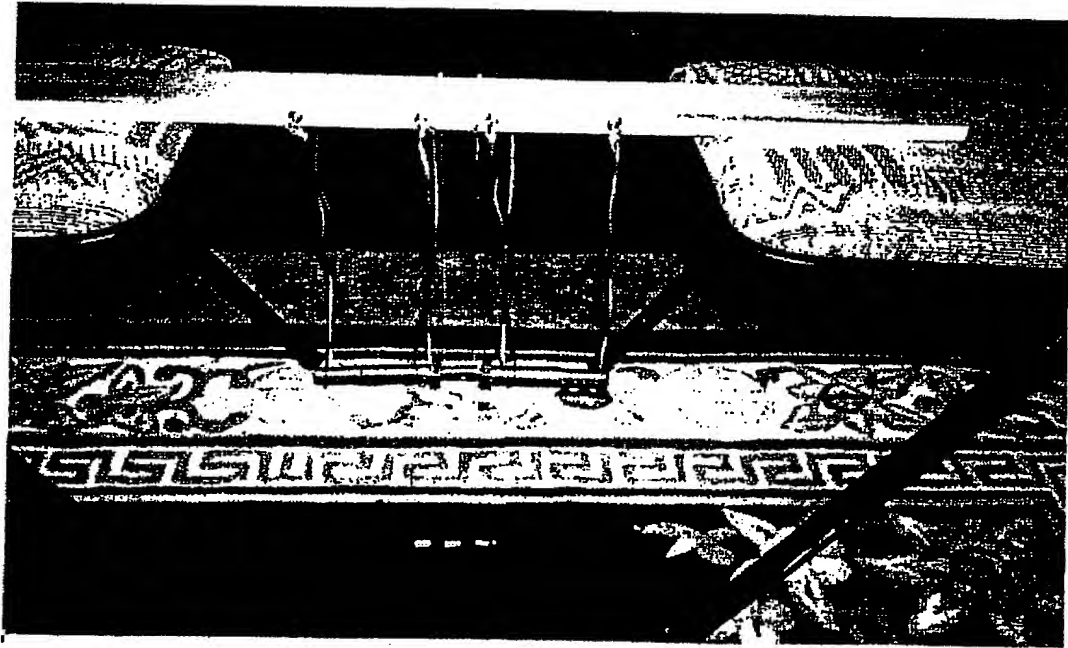


Figure 1

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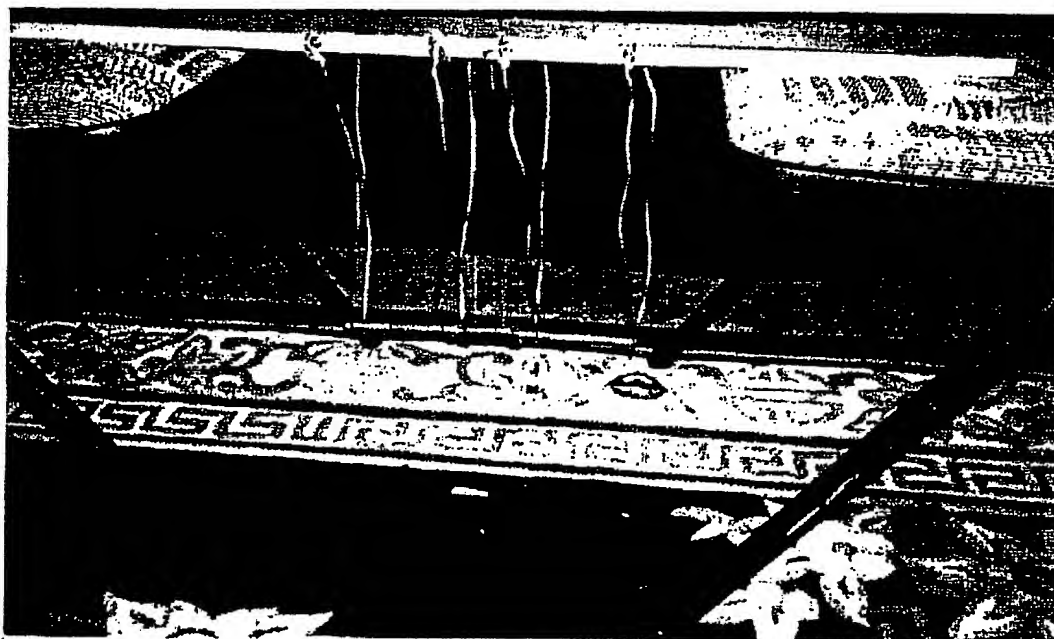


Figure 2

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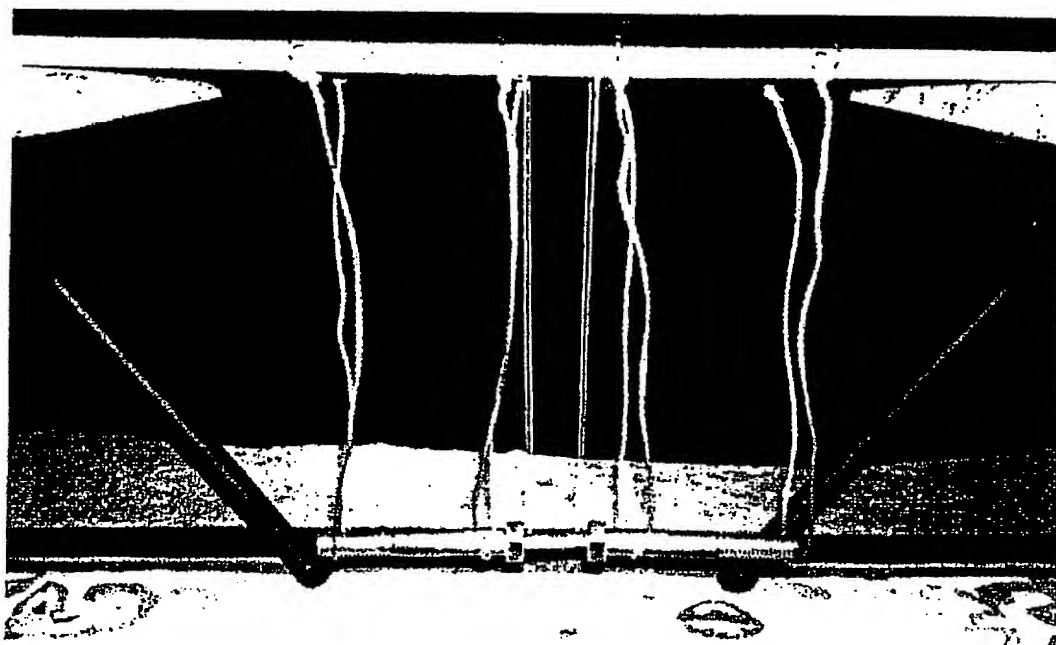


Figure 3

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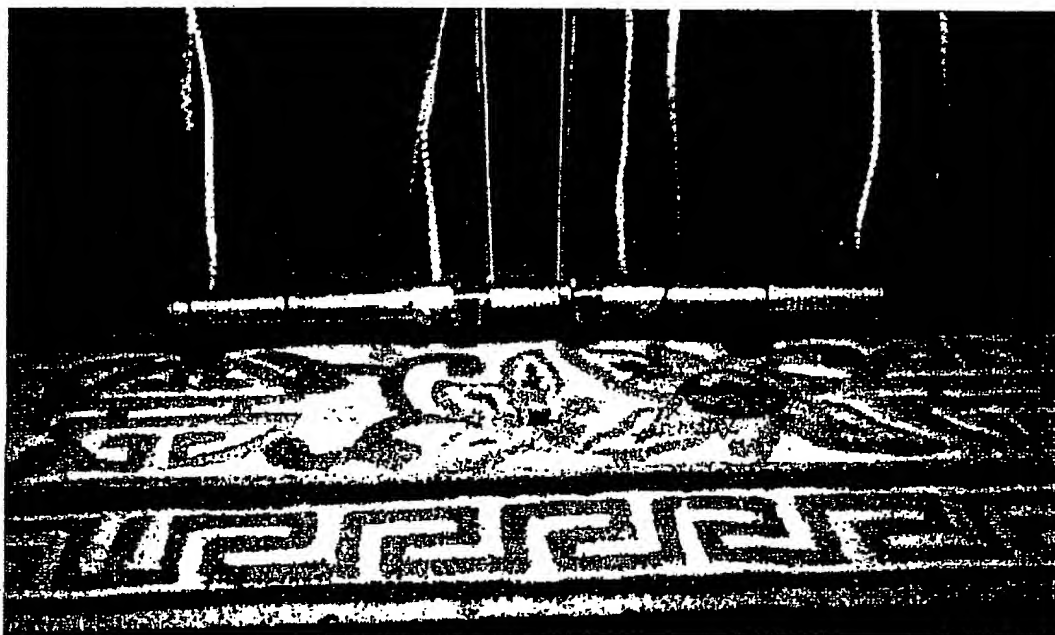


Figure 4

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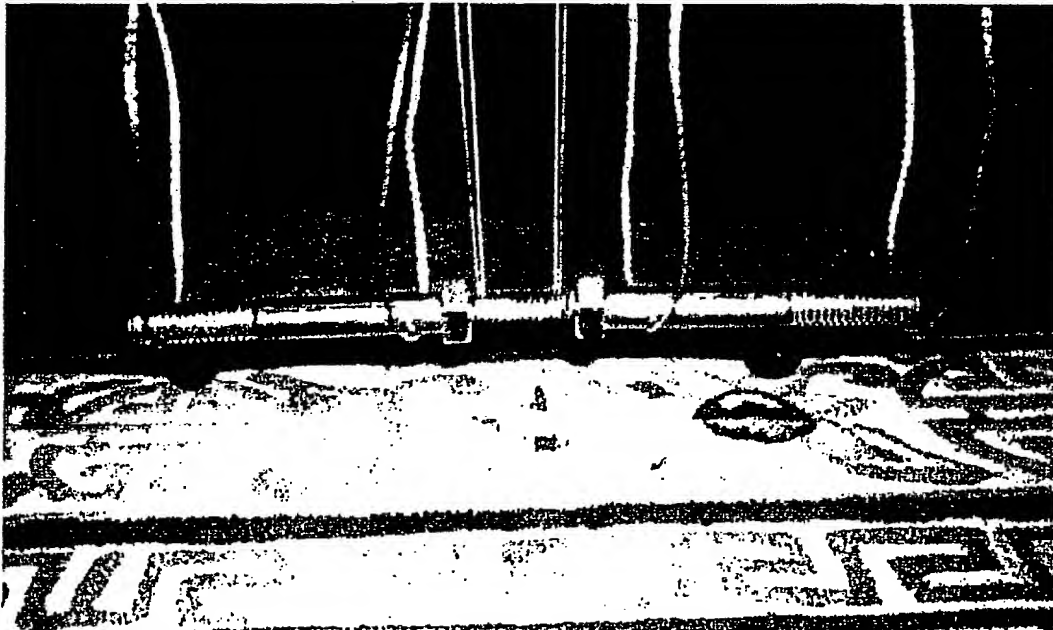


Figure 5

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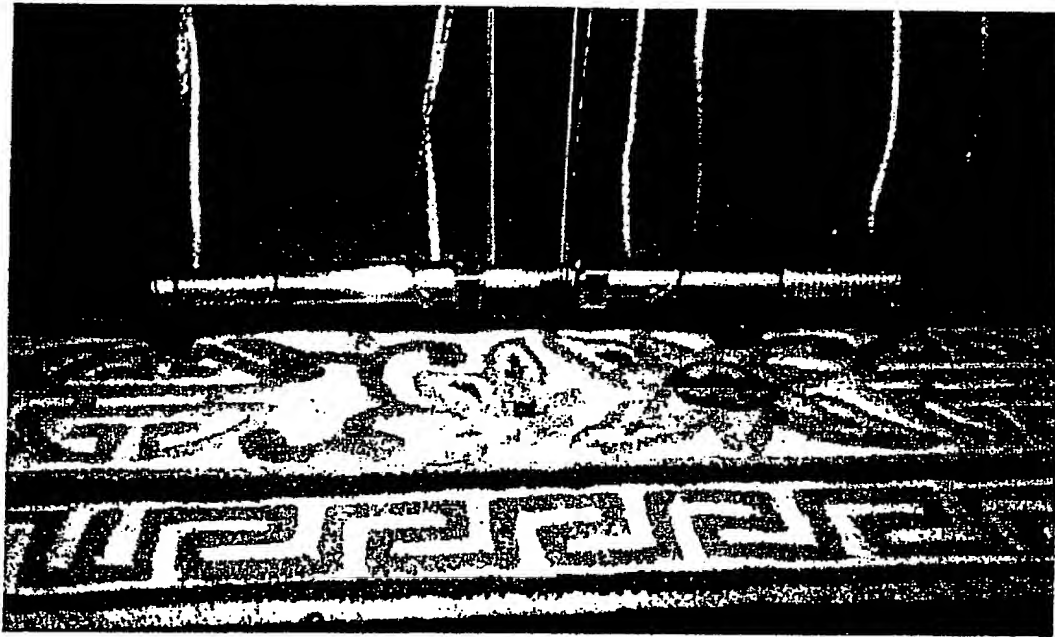


Figure 6

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